

Applicant Name Columbia Falls, City of
Project Name Columbia Falls Wastewater System Improvements

Project Abstract

The City of Columbia Falls proposes a two-phase approach to upgrade and expand its wastewater treatment plant. Phase 1 improvements will mainly replace equipment and structures that are beyond their useful life, improve existing processes to meet regulatory changes, and provide a capacity and service life to 2025 or beyond. The total proposed cost for these improvements is \$3.6 million. Phase 2 improvements will further expand the capacity of the facility and improve processes to meet future regulatory changes.

The proposed improvements include:

- Screenings equipment replacement;
- Adding screenings washing and compacting capability;
- Replacing existing grit handling equipment;
- Improving the headworks ventilation system;
- Constructing a new biological nutrient removal process basin to meet future loading and permit requirements;
- Upgrading the existing disinfection system to comply with more stringent regulations and meet future flow requirements;
- Expanding bio-solids storage capacity and developing an alternate means of disposal; and
- Installing a standby generator.

The Phase 1 improvements will preserve the integrity and quality of the Flathead River and Flathead Lake by increasing the treatment plant's ability to remove nitrogen. In addition, installation of ultraviolet (UV) disinfection will remove hazardous chemicals from the river and reduce effluent toxicity.

The improvements will include installation of more energy-efficient equipment and systems that will reduce energy and chemical use at the facility. The improvements will expand the plant's ability to use plant effluent for irrigation and non-potable water use at the facility, reducing the future demand on the potable water supply. Expansion of the bio-solids storage and disposal system will allow for continued beneficial re-use of the facility's bio-solids.

The proposed improvements will allow more dense, urban-type development, which will increase housing availability closer to schools, shopping, employment centers, etc.; reduce sprawl development and commuting time, potentially reducing fuel usage; and potentially reduce housing costs.